

WHAT IS CLAIMED IS:

1. An elevator vibration reducing device comprising:
a vibration sensor for detecting horizontal vibration of a cage;

an actuator for displacing the cage horizontally; and

a control portion having a computing portion for computing a vibration reduction control signal for reducing the horizontal vibration of the cage from a vibration detection signal from the vibration sensor, and adapted to control the actuator,

wherein the control portion has a detection signal comparing portion for comparing a detection value obtained from the vibration detection signal with a previously set value, the control portion stopping the control of the actuator when the detection value has become equal to or larger than the set value.

2. An elevator vibration reducing device according to Claim 1, wherein the control portion temporarily stops the control of the actuator upon detection of abnormality and counts the number of times that abnormality has been detected, the control portion stopping the control of the actuator completely when the number of times thus counted has attained a previously set number of times.

3. An elevator vibration reducing device comprising:

a vibration sensor for detecting horizontal vibration of a

cage;

an actuator for displacing the cage horizontally;

a control portion having a computing portion for computing a vibration reduction control signal for reducing the horizontal vibration of the cage from a vibration detection signal from the vibration sensor, and adapted to control the actuator; and

a power amplifier provided between the actuator and the control portion and having an amplifier main body for amplifying the vibration reduction control signal,

wherein the control portion is equipped with current restricting means for restricting a value of a current output from the power amplifier to the actuator, and wherein the power amplifier is equipped with a current comparing portion which stops an output of the vibration reduction control signal to the actuator when the value of the current output from the power amplifier to the actuator is not smaller than a previously set value.

4. An elevator vibration reducing device comprising:

a vibration sensor for detecting horizontal vibration of a cage;

an actuator for displacing the cage horizontally; and

a control portion having a computing portion for computing a vibration reduction control signal for reducing the horizontal vibration of the cage from vibration detection signals from the

vibration sensor, and adapted to control the actuator,

wherein the control portion has a plurality of detection signal comparing portions for comparing detection values obtained from the vibration detection signals with previously set values and a branching portion for assigning the vibration detection signals to the detection signal comparing portions corresponding to the respective frequencies thereof, and wherein the set values in the detection signal comparing portions are different from each other according to frequency bands corresponding thereto, the control portion stopping the control of the actuator when the detection values have become equal to or larger than the set values.

5. An elevator vibration reducing device according to Claim 4, wherein the control portion temporarily stops the control of the actuator upon detection of abnormality and counts the number of times that abnormality has been detected, the control portion stopping the control of the actuator completely when the number of times thus counted has attained a previously set number of times.

6. An elevator vibration reducing device comprising:

a plurality of vibration sensors for detecting vibrations of a cage in the same horizontal direction;

an actuator for displacing the cage horizontally; and

a control portion having a computing portion for computing

a vibration reduction control signal for reducing the horizontal vibrations of the cage from vibration detection signals from the vibration sensors, and adapted to control the actuator,

wherein the control portion has a multiple sensor output comparing portion for making failure judgment on the vibration sensors by comparing the vibration detection signals, the control portion stopping the control of the actuator when the vibration sensors are judged to be out of order.

7. An elevator vibration reducing device according to Claim 6, wherein the control portion temporarily stops the control of the actuator upon detection of abnormality and counts the number of times that abnormality has been detected, the control portion stopping the control of the actuator completely when the number of times thus counted has attained a previously set number of times.

8. An elevator vibration reducing device comprising:

a vibration sensor for detecting horizontal vibration of a cage;

an actuator for displacing the cage horizontally;

a control portion having a computing portion for computing a vibration reduction control signal for reducing the horizontal vibration of the cage from a vibration detection signal from the vibration sensor, and adapted to control the actuator; and

an inspecting portion having an inspection signal generating portion for outputting an inspection signal to the control portion so as to drive the actuator when the cage is at rest and an abnormality judging portion for making abnormality judgment by comparing a vibration detected by the vibration sensor when the inspection signal is output with a vibration directly obtained from the inspection signal.